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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,695	11/09/2001	Hideo Yamamoto	Q67179	5833

7590

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SUGHRUE, MION. ZINN
MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3202

EXAMINER

MCCHESNEY, ELIZABETH A

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,695

Applicant(s)

YAMAMOTO ET AL.

Examiner

Elizabeth A McChesney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. This action is in response to applicant's response filed 6/18/03. Claims 1-9 are pending in the present application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claim 1** is rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders et al. (US Patent No. 5,263,188) in view of Shoda et al. (US Patent No. 5,177,801).

Regarding **claim 1**, Sanders et al. (hereinafter, "Sanders") discloses a vehicle equipped with front and rear speakers, includes a fade control which is used to apportion the sound volume between the front and rear speakers (col. 1-lines 17-20). Sanders fails to specifically teach the fader in relation to the front and rear speakers in detail. Shoda et al. (hereinafter, "Shoda") discloses cross fader that fades-in or fades-out audio signals by moving an operation knob. Shoda further discloses two signals in figure 2 as A BUS and B BUS in which a level adjuster 31a is inversely interlocked with the level adjuster 31b (figure 2) wherein the level adjuster 31b raises the level of the signal (by some arbitrary value, such as k1) when the level adjuster 31a lowers the level of the signal (by some arbitrary value, such as K1) (col. 5-lines 32-35). The volume

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remains unchanged and is shown by the signals inversely changing and being mixed together and output through terminal 50 (col. 5-lines 35-41). Therefore, it would have been obvious to one of ordinary skill in the art to use a fader as disclosed by Shoda in a vehicle with fader to provide fading without changing the overall volume and provide convenience to the user.

Regarding **claims 2 and 3**, Sanders discloses a vehicle equipped with front and rear speakers, includes a fade control which is used to apportion the sound volume between the front and rear speakers (col. 1-lines 17-20). Sanders fails to specifically teach the fader in relation to the front and rear speakers in detail. Shoda discloses a cross fader that fades-in or fades-out audio signals by moving an operation knob. Shoda further discloses two signals in figure 2 as A BUS and B BUS in which a level adjuster 31a is inversely interlocked with the level adjuster 31b (figure 2) wherein the level adjuster 31b raises the level of the signal (by some arbitrary value, such as k1) when the level adjuster 31a lowers the level of the signal (by some arbitrary value, such as K1) (col. 5-lines 32-35). The volume remains unchanged and is shown by the signals inversely changing and being mixed together and output through terminal 50 (col. 5-lines 35-41).

It is inherently taught by the references that the prescribed position would be the center between the front seat and the rear seat wherein it is the position that the front and rear speakers would be in a relationship of 50-50 signal output and no fading is taking place. Any fading from this point would result in a stronger signal either in the

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front or the rear, depending on the direction of the fade, and an opposite or inversely proportional change from the other.

Regarding **claims 4 and 5**, Sanders in view of Shoda discloses everything claimed as applied above (see claim 3). It is inherently taught by the references that at the prescribed position, the center between the front and rear speakers, the signal outputting from this point would be a 50-50 relationship, an equal amount from each speaker. Therefore the attenuations are computed by the prescribed position in relation to each respective speaker. For, example a level adjusting fade to the A BUS signal (by an arbitrary k_1) would result in an inverse fade in the B BUS signal in which they are then mixed together and output from the output terminal wherein the overall volume would not change, only the signals are affected inversely proportional (col. 5-lines 32-41).

Regarding **claim 6**, Sanders in view of Shoda discloses everything claimed as applied above (see claim 1). It is inherently taught by the references that the prescribed position would be the center between the front seat and the rear seat wherein it is the position that the front and rear speakers would be at a 50-50 position. Any fading from this point would result in a stronger signal either in the front or the rear, depending on the direction of the fade, and an opposite, proportional change in the other (either front or rear). At a the center position or a 50-50 position, a fade increase to the one signal (A BUS) or for example in the front would result in a decrease in the signal (B BUS), or for example the rear without substantially changing the overall volume as the signals are added together and output through terminal 50. The overall volume output through

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terminal 50 remains the same and the changes happen inversely to the two signals A and B BUS.

Regarding **claim 7**, it is inherent that the prescribed position has previously recorded attenuation references wherein the changes made through the fader would therefore result in a computation of the related signal. For example a change in the fader (as a previously recorded setting) would result in the and inversely proportional change in the second signal in the signal.

Regarding **claim 8**, see Examiner's comments in Claim 6.

Regarding **claim 9**, see Examiner's comments in Claim 7.

Response to Arguments

4. Applicant's arguments filed on June 18, 2003 have been fully considered but they are not persuasive. The Examiner maintains that it is well known in the art that faders commonly respond between the front and rear speakers of a vehicle in a proportional manner. Shoda discloses two signals in figure 2 as A BUS and B BUS in which a level adjuster 31a is inversely interlocked with the level adjuster 31b (figure 2) wherein the level adjuster 31b raises the level of the signal when the level adjuster 31a lowers the level of the signal. The volume remains unchanged and is shown by the signals inversely changing and being mixed together and output through terminal 50. It would have been obvious for one of ordinary skill to use such a fader as disclosed by Shoda in a vehicle for the purpose of fading between the front and rear speakers without losing any of the total volume and therefore customizing the sound per the user in the vehicle.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. McChesney whose telephone number is (703) 308-4563. The examiner can normally be reached Monday – Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

EAM
August 18, 2003



**MINSUN OH HARVEY
PRIMARY EXAMINER**